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EXAMINER

MEINECKE DIAZ, SUSANNA M

ART UNIT PAPER NUMBER

3623

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/415,507

Applicant(s)

DALAL, MUKESH

Examiner

Susanna M. Diaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Final Office action is responsive to Applicant's amendment filed December 15, 2003.

Claims 1-47 have been amended.

Claims 1-47 are presented for examination.

2. The previously pending objection is withdrawn in response to Applicant's amendment of claim 46.

The previously pending rejections under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph are withdrawn in response to Applicant's amendment of the claims.

The previously pending rejections of claims 11-32 and 47 under 35 U.S.C. § 101 are withdrawn in response to Applicant's amendment of the claims; however, Applicant's amendments to other claims have incurred a new rejection under 35 U.S.C. § 101 (see rejection below).

3. Applicant's attorney explained to the Examiner in a telephone interview that an IDS was submitted in response to the previously presented rejection regarding a potential issue of public use or on-sale bar. The Examiner has not received these references and therefore they have not been considered. However, in light of Applicant's extensive claim amendments and explanation of how the claimed invention differs over the assignee's product RHYTHM, the previously pending rejection under 35 U.S.C. § 102(b) is hereby withdrawn.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-47 have been considered but are moot in view of the new grounds of rejection, which are necessitated by Applicant's amendment of claims 1-47.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-10 and 33-43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of

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manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, while claims 1-10 and 33-43 produce a useful, concrete, and tangible result, there is no recitation of technology in the body of the claims. It is respectfully recommended that Applicant amend these claims to explicitly recite at least one of the core steps in the body of the claims as being actively performed by technology (e.g., a computer).

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhaskaran et al. (U.S. Patent No. 6,157,915).

Bhaskaran discloses a system for optimizing a request-promise workflow between a first entity and a second entity downstream from the first entity, the first entity supplying supplies to the second entity in response to demand for supplies from the second entity, the system being associated with the second entity and comprising one or more processing units and one or more memory units collectively operable to:

[Claim 1] establish a demand at the second entity for one or more supplies supplied by the first entity, the demand for the supplies based at least in part on a demand placed on the second entity by a third entity downstream from the second entity (Fig. 1; col. 4, lines 1-17);

optimize the second entity's production associated with meeting the demand from the third entity to generate the request for the supplies (col. 4, lines 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed);

communicate the request for the supplies to the first entity, a system associated with the first entity operable to optimize the first entity's production of the supplies using the request for the supplies as a first constraint to generate a promise for the supplies based on the request for the supplies (col. 4, lines 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed. A quantity of demanded components or assembled products from a given assembler, vendor, etc. is a type of constraint; In col. 4, lines 1-5, Bhaskaran states that the causes, or culprits, of constraints include anything from material constraints to capacity constraints to constraints associated with a "volatile demand from various global markets.");

receive the promise for the supplies from the first entity, the promise for the supplies having been generated according to an optimization of the first entity's

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production of the supplies using the request for the supplies as a first constraint, the promise for the supplies identifying a culprit as a cause for the promise for the supplies not satisfying the request for the supplies if the promise for the supplies does not satisfy the request for the supplies (col. 4, lines 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed. In col. 8, lines 35-42, an assembler's production capabilities exemplify a culprit as the reason why the assembler cannot produce the requested quantity of items. In col. 4, lines 1-5, Bhaskaran states that the causes, or culprits, of constraints include anything from material constraints to capacity constraints to constraints associated with a "volatile demand from various global markets.");

[Claim 2] wherein the system associated with the first entity is operable to repeat the following until the promise for the supplies satisfies the request for the supplies:

receiving a request for the supplies from the second entity (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed);

reoptimizing the first entity's production of the supplies using the request for the supplies as a constraint to generate the promise for the supplies (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed); and

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communicating the promise for the supplies to the second entity (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed);

[Claim 4] wherein the system associated with the first entity is further operable to optimize the first entity's production of the supplies independently of the second entity (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed. Each entity can propose a change before knowing of any potential culprits caused by another entity); and

the system associated with the second entity is further operable to optimize the second entity's production associated with meeting the demand from the third entity independently of the first entity (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed. Each entity can propose a change before knowing of any potential culprits caused by another entity);

[Claim 5] wherein the request for the supplies comprises a first request for a first supply and a second request for a second supply (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product); and



the promise for the supplies comprises a first promise for the first supply and a second promise for the second supply, the promise for the supplies identifying the second supply as the culprit if the promise for the supplies does not satisfy the request for the supplies (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product);

[Claim 6] wherein the second promise does not satisfy the second request for the second supply, the promise for the supplies identifying the second supply as the culprit (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product. Any entity can be the source of a culprit); and

the system associated with the second entity is further operable to optimize the second entity's production associated with meeting the demand from the third entity to generate a new request for the supplies using the second promise for the second supply to generate the second constraint (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product. Any entity can be the source of a culprit);

[Claim 7] wherein the request for the supplies comprises a bundled request for at least two supplies for the second entity's production associated with meeting the demand from the third entity (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product);

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the promise for the supplies in response to the bundled request for the at least two supplies comprises a first promise, a second promise, and the culprit, the culprit identifying the second promise as the cause for the promise for the supplies not satisfying the bundled request for the at least two supplies (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – Components can be produced by various entities to create a final assembled product. Any entity can be the source of a culprit); and

the system associated with the second entity is operable to reoptimize the second entity's production associated with meeting the demand from the third entity to generate a new request for the at least two supplies using the second promise to generate the second constraint (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed);

[Claim 8] wherein the promise for the supplies comprises an optimization objective and a promise constraint (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed); and

the system associated with the second entity is operable to reoptimize the second entity's production associated with meeting the demand from the third entity to generate a new request for the supplies using the promise constraint and the optimization objective (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col.

8, lines 23-49 – The overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed);

[Claim 9] wherein the system associated with the second entity is operable to generate a request for the supplies in accordance with one or more internal resources (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49);

[Claim 10] wherein the system associated with the second entity is operable to communicate a demand promise associated with meeting the demand from the third party to the third entity if the promise for the supplies satisfies the request for the supplies (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49).

As per claims 1 and 3, Bhaskaran teaches that the overall supply chain planning is optimized and reoptimized for all entities in the supply chain every time a new scenario is proposed (col. 4, lines 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49). In col. 8, lines 35-42, an assembler's production capabilities exemplify a culprit as the reason why the assembler cannot produce the requested quantity of items. Furthermore, in col. 4, lines 1-5, Bhaskaran states that the causes, or culprits, of constraints include anything from material constraints to capacity constraints to constraints associated with a "volatile demand from various global markets." Bhaskaran also provides the specific scenario in which one assembler does not have the production capacity to fill a request component demand; therefore, another assembler is notified that he/she needs to make up for this lack of production capacity of the first assembler (col. 8, lines 34-42). As discussed above, the overall supply chain planning

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is reoptimized for all entities with every change in scenario; however, Bhaskaran does not expressly discuss what occurs if, for example, no assemblers can meet the component demand ultimately required to fulfill demand of assembled products to the end-customer (e.g., Bhaskaran's "global marketplace"). However, it is old and well-known in the area of supply and demand that demand requirements will not fully be met if the supply is not available. In other words, if there is a material or production capacity shortage collectively at any level in Bhaskaran's supply chain upstream from the distributor (e.g., at the vendor, subassembler, or final assembler), then the distributor has no choice but to re-evaluate his/her ability to provide all demanded products to the global marketplace. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt Bhaskaran to reoptimize a second entity's production associated with meeting a demand (e.g., the demand promised by a distributor to a global marketplace) when it is determined that a first entity can only meet a second constraint due to a culprit impeding a first constraint in order to facilitate the overall optimization and reoptimization of supply chain production (e.g., taking into account a promise constraint and an optimization objective) when it is determined that previously promised demand (e.g., to a global marketplace) cannot be fulfilled by the supply chain as a whole. This modification to Bhaskaran addresses the following limitations of claim 1: if the promise for the supplies does not satisfy the request for the supplies, generate a second constraint according to the culprit identified in the promise for the supplies; and if the promise for the supplies does not satisfy the request for the supplies, reoptimize the second entity's production associated

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with meeting the demand from the third entity using the second constraint generated according to the culprit identified in the promise for the supplies to generate a new request for the supplies. Also addressed by this modified version of Bhaskaran are the limitations recited in claim 3.

[Claims 11-21] Claims 11-21 recite limitations already addressed by the rejection of claims 1-10 above; therefore, the same rejection applies.

Furthermore, as per claim 11, when Bhaskaran's distributor presents an initially proposed demand from its global marketplace to the upstream entities in the supply chain, the distributor is not aware of the upstream entities' abilities to meet this initially proposed demand until receiving feedback from these upstream entities. Therefore, for all intents and purposes, the distributor's initially proposed demand is made under the assumption that all supplies are unlimited.

Regarding claim 17, Bhaskaran teaches that components can be produced by various entities to create a final assembled product (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49), which means that the collection of components is effectively a bundled request for supplies required to produce a unit of demand, i.e., a final assembled product.

In reference to claim 20, an "acceptable range" of promise for supplies is initially understood as equal to or greater than an entity's requested component or assembled product demand.

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[Claims 22-32] Claims 22-32 recite limitations already addressed by the rejection of claims 1-21 above; therefore, the same rejection applies.

Regarding claims 26 and 28, Bhaskaran teaches that components can be produced by various entities to create a final assembled product (col. 4, lines 1-5, 45-48; col. 6, lines 20-23; col. 7, lines 52-66; col. 8, lines 23-49), which means that the collection of components is effectively a bundled request for supplies required to produce a unit of demand, i.e., a final assembled product. The subsets of components produced by each entity exemplify respective sub-bundled requests. Bhaskaran is able to handle multiple scenarios for various demand requests; therefore, it is understood that multiple promises for supplies from multiple suppliers are used to optimize the supply chain. While Bhaskaran does not expressly state that a second sub-bundled promise is larger than a first sub-bundled promise, Official Notice is taken that it is old and well-known in the art that most final assembled products are formed of different sets of elements, each set comprising a unique number of elements. Therefore, in order to make such final assembled products, it is likely that Bhaskaran's invention would assign a second sub-bundled promise to one entity that is larger than a first sub-bundled promise assigned to a different or even the same entity.

[Claims 33-43] Claims 33-43 recite limitations already addressed by the rejection of claims 1-32 above; therefore, the same rejection applies.

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[Claims 44-47]      Claims 44-47 recite limitations already addressed by the rejection of claims 1-32 above; therefore, the same rejection applies.

### ***Conclusion***

9.      The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Bellini et al. (U.S. Patent No. 5,974,395) -- This patent is assigned to the same assignee as the instant application (i2 Technologies, Inc.) and discusses supply chain planning that takes into account various constraints.

Crawford, Jr. et al. (U.S. Patent No. 5,943,244) -- This patent is assigned to the same assignee as the instant application (i2 Technologies, Inc.) and discusses supply chain planning that takes into account various constraints.

10.    Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (703) 305-1337. The examiner can normally be reached on Monday-Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703)308-1113.

Any response to this action should be mailed to:

**Commissioner for Patents  
P.O. Box 1450  
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**(703)305-7687** [Official communications; including  
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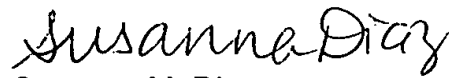


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Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 22202, 7<sup>th</sup> floor receptionist.



Susanna M. Diaz  
Primary Examiner  
Art Unit 3623  
April 7, 2004